HEAT-RESISTANT POLY-ALPHA, ALPHA-DIFLUORO-PARAXYLYLENE FILM

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Abstract of **JP10195181**

PROBLEM TO BE SOLVED: To obtain a highly heat-stable heat-resistant poly-&alpha ,&alpha -difluoro- paraxylylene film through polymerization by chemical vapor deposition by using a synthesized tetrafluoro-[2,2]-paracyclophane as the starting material and to thereby make it possible to widen the range of application of a poly-p- xylylene film. SOLUTION: Tetrafluoro-[2,2]-paracyclophane represented by formula I is obtained by fluorinating diketone-[2,2]-paracyclophane represented by formula III. Tetrafluoro-[2,2]-paracyclophane comprising substantially a pure substance is subjected to decomposition into radicals, polymerization thereof, and vapor deposition on a glass base plate under chemical vapor deposition conditions generally used to give a heat-resistant film of poly-&alpha ,&alpha -difluoro-paraxylylene represented by formula II (n is a degree of polymerization). This film has such excellent heat resistance that no exothermic peak due to decomposition will appear up to 550 deg.C in nitrogen in the differential thermal analysis.